

**REMARKS**

Claims 31 to 36 are added, and therefore claims 14 to 15 and 19 to 36 are currently pending and being considered (since claims 10 to 13 and 16 to 18 were previously withdrawn in response to a restriction requirement).

Reconsideration of the application is respectfully requested based on the following remarks.

With respect to paragraph 4 of the Office Action, claims 14, 19, 20 to 28 and 30 were rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,422,073 (the “Winner ‘073” reference) in view of U.S. Patent No. 4,464,653 (the “Winner ‘653” reference).

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied.

First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Also, as clearly indicated by the Supreme Court in *KSR*, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, at 1396.

Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Independent claims 14 and 30 are both directed to control units that include a *sensor* and a *processor*. These claims also include the features that *the sensor is configured to return a first portion of a fault pattern in response to a first read instruction and a second portion of the fault pattern in response to a second read instruction*. Additionally, *the first*

*returned portion has bits corresponding to a first plurality of fault flags, and the second portion has bits corresponding to a second plurality of fault flags different than the first plurality of fault flags.*

Independent claim 30 also includes the claim feature that *the sensor is configured to transmit exactly one operating state bit with every regular sensor output value transmission, the operating state bit indicating whether at least one fault is detected by the sensor and whether at least one of the two read instructions will return a fault indication.*

The “Winner ‘073” and “Winner ‘653” references, either alone or in combination, do not disclose or suggest these claim features.

Regarding the above-identified features common to claims 14 and 30, the “Winner ‘073” reference does not even disclose the feature of *transmitting a digital fault pattern*, let alone doing so *in two different portions in response to two different read instructions*. The Office Action contends on page 3 that the “Winner ‘073” reference discloses means for transmitting the fault pattern in the form of the UART transmitter (ref. no. 27) and the description of col. 2, line 20, to col. 4, line 17. However, Applicant respectfully disagrees. In actuality, the “Winner ‘073” reference merely discusses transmitting a sensor measurement, not a fault pattern, via the UART and other components such as transistor 36. For example, the “Winner ‘073” reference at col. 2, lines 60 to 65, states as follows (emphasis added):

The analog signal from the sensor bridge, after conversion, is present in converter 25 as a 12 bit parallel format digital word. To permit transmission of the 12 bit word over a two wire transmission line the word is converted from parallel to serial format in a Universal Asynchronous Receiver Transmitter (UART) 27.

See also, e.g., the “Winner ‘073” reference generally at col. 2, line 60, to col. 3, line 29. Thus, because a sensor measurement is not the same as a fault pattern, the “Winner ‘073” reference does not disclose the feature of *transmitting a digital fault pattern*, or doing so *in two different portions in response to two different read instructions*.

Furthermore, regarding the additional features of claim 30, because the “Winner ‘073” reference merely transmits the sensor measurement, it necessarily does not disclose the feature of *transmitting exactly one status bit indicating if a fault is detected*.

Moreover, the “Winner ‘653” reference does not remedy the critical deficiencies of the “Winner ‘073” reference. Specifically, with respect to both claims 14 and 30, the

“Winner ‘653” reference also does not disclose or suggest the feature of *transmitting a digital fault pattern in two different portions in response to two different read instructions*. Instead, the “Winner ‘653” reference only discusses a single type of transmission, namely that of FIG. 8. However, although Applicant does not concede that the transmission of FIG. 8 includes a digital fault pattern, even if it does, for the sake of argument, the transmission of FIG. 8 is a single transmission, and thus does not disclose the features of *two different portions of a fault pattern (each portion having bits corresponding to respectively different pluralities of fault flags), which are transmitted in response to two different read instructions*. For example, even if the transmission of FIG. 8 is transmitted twice, at separate instances, it would still not include *two different portions of a fault pattern having bits respectively corresponding to two different pluralities of fault flags*. Instead, two separate transmissions of the content of FIG. 8 would only be two transmissions of the same content, not *two different fault pattern portions*.

Thus, neither the “Winner ‘073” reference, nor the “Winner ‘653” reference, nor their combination, discloses or suggests *transmitting a digital fault pattern in two different portions in response to two different read instructions*.

Additionally with respect to claim 30, the “Winner ‘653” reference also does not disclose or suggest the feature of *transmitting exactly one status bit indicating if a fault is detected*. Instead, the “Winner ‘653” reference states, at col. 11, lines 19-21, that the “polarity and overrange bits of byte 111 are checked 177, 178 and if either is present, the replace sensor flag is set” (emphasis added).

Furthermore, discussion of “failure flags” or similarly-termed items variously at col. 10, line 18, to col. 11, line 24, of the “Winner ‘653” reference discloses nothing concerning the above-identified claim features relating to the transmitted digital fault pattern because these various “fault flags” of the “Winner ‘653” reference are set in response to various conditions experienced by the controller (ref. no. 15 in FIG. 2 of the “Winner ‘653” reference) and therefore not indicative of anything relevant to the claimed fault pattern transmitted by a sensor (e.g., ref. no. 16 in FIG. 2 of the “Winner ‘653” reference).

Therefore, the “Winner ‘073” and “Winner ‘653” references do not disclose at least the above-identified features of, and thus do not render obvious, independent claims 14 and 30, as well as their dependent claims, and it is respectfully requested that the rejections be withdrawn.

With respect to paragraph 5 of the Office Action, claims 15 and 29 were rejected under 35 U.S.C. § 103(a) as unpatentable over the "Winner '073" and "Winner '653" references in view of U.S. Patent No. 6,122,577 to Mergenthaler et al. (the "Mergenthaler" reference).

Claims 15 and 29 depend on independent claim 14, and are therefore allowable at least for the reasons explained above, since the critical deficiencies of the "Winner '073" and "Winner '653" references with respect to this independent claim are not cured by the "Mergenthaler" reference. Therefore, withdrawal of the rejections is respectfully requested.

New claims 31 to 36 these claims do not add any new matter and are supported by the Specification. These claims are allowable at least because they depend from one of independent claims 14 and 30, which are allowable for the reasons explained above.

Accordingly, claims 14 to 15 and 19 to 36 are allowable.

### CONCLUSION

Applicants respectfully submit that all pending claims of the present application are allowable. It is therefore respectfully requested that the rejections (and any objections) be withdrawn. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

Respectfully submitted,

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